

What is claimed is:

1. A gas sensing element comprising:

a solid electrolytic substrate having oxygen ion conductivity:

5 a measured gas side electrode provided on a surface of said solid electrolytic substrate so as to be exposed to a measured gas;

a reference gas side electrode provided on another surface of said solid electrolytic substrate so as to be exposed to a reference gas; and

10 a porous electrode protecting layer covering said measured gas side electrode,

wherein a limit current density of said electrode protecting layer is in a range from 0.04 mA/mm<sup>2</sup> to 0.15 mA/mm<sup>2</sup> on a unit area of said reference gas side electrode under the following conditions:

15 an oxygen concentration in said measured gas is 0.1%, a measurement temperature and an element temperature (an element surface temperature at the measured gas side of a sensing portion) are not less than 600°C, and a voltage applied between the measured gas side electrode and said reference gas side electrode is 0.5 V (i.e., an oxygen pumping in the direction from the measured gas side to the reference gas side).

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